Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Advanced Television Systems	)	
and Their Impact Upon the	)	MM Docket No. 87-268
Existing Television Broadcast	)	
Service	)	

TO: The Commission

CITIZENS FOR HDTV COMMENTS ON THE FIFTH
NOTICE OF PROPOSED RULE MAKING

July 11, 1996

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CITIZENS FOR HDTV COMMENTS ON THE FIFTH NOTICE OF PROPOSED RULE MAKING

These comments on the Commission's Fifth Further Notice of Proposed Rule making (FCC 96-207, released May 20, 1996) ("Fifth NPRM" or "Notice") are submitted on behalf of unions, consumer and senior citizens groups, retailers, manufacturers, and media companies, who have joined together in the Citizens for HDTV Coalition ("Coalition"). The members of the Coalition of Americans who have a direct stake in the prompt, orderly, and nation-wide implementation of the new advanced digital television ("DTV") broadcast system, including high definition television ("HDTV"), which is to replace today's analog television broadcasting.

SUMMARY

The Coalition strongly supports the Commission's proposals in its Fifth NPRM to adopt in its entirety the Advanced Television Systems Committee ("ATSC") DTV transmission standard ("ATSC Standard" or "Standard"), and to require the sole use of the ATSC Standard by DTV broadcasting licensees.

The earliest possible adoption of the Standard by the Commission—together with the allotment and assignment of channels to DTV licensees—and adherence to it by the broadcasting industry, will, we believe, unleash tremendous investment and trigger the rapid conversion to DTV by all sectors involved: broadcasting, production and services, advertising, manufacturing, and consumers.

In turn, this conversion will serve the public interest and support the Commission's goals by: 1) effecting the speediest possible transition to a new nation-wide, all-digital broadcast television and information system accessible to all Americans ; 2) providing the opportunity for continued competition from the broadcasting medium to other media (wired and wireless cable, satellite, telephone, etc.); and, 3) achieving greater spectrum efficiency by permitting the earliest recapture of a substantial portion of the TV bands for additional uses.

This transition, and the nature of the new system itself, built on the flexible, extensible, interoperable, and consumer-friendly ATSC Standard

described in the Notice, will:

- Contribute mightily to the lives of all Americans, who already depend on free over-the-air television as their free and ubiquitous source for news, sports, entertainment, education and more;
- Give access to interactive and other information services, realizing a giant step forward in the national information infrastructure, via broadcasting to virtually all American homes, schools and workplaces;
- Retain and create thousands of jobs in the U.S., and support related economic growth domestically and U.S. trade internationally; and,
- Ensure affordable receivers and converters for consumers unable to buy or not interested in having equipment for services beyond television.

I. REASONS TO ADOPT THE STANDARD & MANDATE ITS USE

The Commission's tentative conclusions to adopt the Standard and require its use in DTV broadcasting would represent the best possible conclusion for this portion of the nine-year process—launched, encouraged, and guided by the Commission itself—to seek a new, advanced television ("ATV") transmission standard for broadcasting.

In this Notice and earlier ones, the Commission has indicated several compelling reasons for adopting and mandating use of the new transmission

Standard for broadcast television. The Coalition concurs with these reasons, which we believe far outweigh suggestions by some, either to adopt no broadcast transmission standard, or to change the one recommended unanimously after detailed and lengthy consideration by the Commission's own multi-industry Advisory Committee.

These reasons include: the unique 'open' and 'universal' nature of the Nation's broadcasting system, as distinguished from other media; the appropriate role of government (the Commission) in adopting and mandating this Standard; the certainty and confidence which the Standard affords for investments by consumers, manufacturers, and service providers; and the importance of the Standard to DTV compatibility with today's NTSC broadcast system and the Commission's planned recapture of part of the TV bands after the transition is completed.

The Coalition wishes to comment on these points, and others, as follows:

a. ***Broadcast Ubiquity Demands the ATSC Standard.*** Unlike any other communications mechanism, terrestrial over-the-air broadcasting is a transmission medium accessible to nearly 100% of the population, whose service is free (given a TV receiver), and whose role as the most pervasive and powerful tool for the dissemination of news, information, entertainment, and, perhaps, other services is undisputed.

It is built upon thousands of interconnected elements for production, recording, signal management, routing, transmission, reception, and display, all of which are based on a set of technical design criteria—transmission standards—so that the thousands of organizations involved in manufacture of hardware and production of software can successfully provide Americans with choice in service, capability and price.

The success—*i.e.* reach, utility, accessibility, and demand—of this broadcast 'system' is built upon the certainty of the transmission standards developed by industry, recommended to the FCC, and adopted by government as in the public interest.

Currently, broadcast television transmission is based on analog technology, the elements of which have been regularly enhanced over some 50 years of general operation. Now, with the substantial advances in capability afforded by digital design, broadcast television transmission requires a new transmission Standard, *i.e.* the ATSC Standard recommended by industry, through ACATS, after eight years of work under the aegis, encouragement, and direction of the FCC.

b. ***Adoption of the ATSC Standard for Broadcast Transmission is the Proper Role of Government.*** There is nothing wrong with the federal government setting the technical framework—*i.e.* transmission standard—for broadcast television, within which significant marketplace competition can thrive. Government standards-setting for broadcast transmission is a

necessary and appropriate mechanism, which has proven its value to the country, and remains key to the opportunity for success of broadcast DTV, including HDTV. Such action has nothing to do with the content of what is transmitted, does not limit the flexibility or utility of home, school, or office receiving devices, and does not interfere with the transmission or content choices of other media.

The Commission can and should, and as it does in part in this NPRM, determine that the ATSC Standard for broadcast transmission is vital to: 1) the confidence of makers and users in a working, nation-wide system, *i.e.* everything sent can be received, anywhere; 2) the viability of broadcasting, *i.e.* 'broadcasting' has the opportunity to enter and participate in the superior digital domain; 3) the maintenance of competition in the television and information industries to the benefit of consumers, *i.e.* let 'broadcasting' provide service and price alternatives and/or extensions to wired or recorded media; and, 4) the retention and creation of jobs in America for thousands who work directly in the field, and millions more in related enterprises.

Models presented as alternatives by the Commission to adoption of the DTV transmission Standard are not based on an open 'broadcast' framework. Where systems are closed, and consumer penetration and reliance on them is limited, government adoption of underlying standards may not be necessary. In an open broadcast system, on the other hand, where there, for all intents and purposes, universal public reliance, the federal government has a distinct

public interest obligation to ensure that Americans are not casualties in the battle of technical giants for supremacy of a particular proprietary approach. Thus, adoption of the ATSC Standard is well within the appropriate functions of a limited federal government, devoted to a marketplace philosophy, and balancing the rights and needs of both citizens and industry.

c. ***Adoption of the ATSC Standard Keeps Faith with a Long and Complex Industry-Government Process***. The ATSC Standard for broadcast transmission is the recommendation of a properly constituted Advisory Committee, serving four FCC administrations over eight years. The Standard represents a strong consensus—affirmed by the unanimous recommendation by ACATS—that reflects agreement among all parties without compromising the technical integrity or multi-media neutrality and utility of the Standard.

The FCC set the agenda for ACATS, accepted without objection all interim reports, approved early findings and recommendations, and was actively involved in setting goals (*e.g.* channel size, spectrum allocations, digital technology 'second to none', interoperability, HDTV and SDTV, etc.) and timetables (*e.g.* issuing draft channel plans, rules on operation and transition, etc.).

The industry—including most importantly the ATV system proponents—provided all technical proposals, full funding for systems development, testing and evaluation, and the hundreds of staff who led study

committees and working groups under a volunteer Chairman.

Were the government to fail to act at all or defer action on the Standard Recommendation, it would send a powerful signal about future cooperation and trustworthiness of government.

d. ***Adoption Confirms an Open Standard, Openly Arrived At.*** The broadcast transmission standard was the product of nearly fifteen years of concerted discussion in U.S. technical standards bodies. The recommended ATSC Standard went though this open process, and then through the further vetting of the FCC's ACATS.

No one who wished to participate in either forum was excluded, or was unable to provide input and recommendations, or to make the case for or against a particular proposal. Indeed, through its Technical Subgroup and several subsidiary Working Groups reporting to it, the design of the original Grand Alliance system proposal was fundamentally altered by ACATS, based on continuing input from a variety of broadcast, computer, manufacturing, and production interests (*e.g.* to achieve full MPEG-2 compression and transport compliance, interoperability with other transmission media and techniques, enhanced video scanning formats with square pixels, etc.).

Far from restraining future innovation, the flexible digital broadcast standard arguably will provide the incentive to invent and enhance because of its underlying 'neutral' character. It is not 'old' technology, but the newest,

most practical technology for widespread and durable consumer implementation. The transmission standard describes the nature of the transmitted signal, and contains no restriction on the design extensibility of receiving devices to store, process or redistribute the information transmitted. The transmitted information is coded and packaged in ways which are sympathetic, first, to all the other transmission and processing mechanisms which would handle it, and, second, to the uses to which it might be put, based on detailed input of all those participating in the standards and ACATS processes.

e. ***The ATSC Standard Will Speed the Transition.*** One goal of implementing DTV broadcasting, announced by the FCC in 1991, is the return of part of the television broadcast spectrum which now is required for maintaining today's analog television broadcasting. With the increasing interest in shortening the transition time to the new system, so that the current system can be turned off sooner, DTV operations must be launched and reach wide penetration at an extraordinary rate. Thousands of service providers and manufacturers must act early to create and distribute the digital services, and millions of individual Americans must act to acquire receiving units.

With this goal in view, there is no benefit to broadcasting to going slow with the transition. All the scenarios argue for fast implementation: to eliminate 'double' facilities and the related costs and complexity; to

maximize the earliest return on investment; and to encourage consumer attention and loyalty to the DTV service.

The certainty provided by the ATSC Standard to which all will build and supply equipment is the strongest single mechanism to achieving the goals of both government and the broadcasting enterprise. In the real world there must be real investments—predicated on a predictable timetable, yet involving literally millions of players. The government's adoption of the ATSC Standard will provide the necessary confidence to all involved, by ensuring the exclusive use of its neutral, flexible, and extensible architecture.

This is why, at the request of its industry, the European Commission has already issued its binding Directive that a single, digital transmission standard (called 'DVB' for Digital Video Broadcasting) will be used in DBS or cable television transmissions, and why it is also expected to do the same shortly for EC countries' terrestrial transmission.

II. THE IMPORTANCE OF ADOPTING THE ENTIRE ATSC STANDARD

The Coalition wishes to emphasize that Commission's adoption and mandated use of the transmission Standard in its entirety is key to the replacement—in a rapid and fully accessible way—of an existing, vibrant, crucial, nation-wide television enterprise. The importance of broadcast television to the Nation's well-being and to its citizenry is well captured in

this Notice and preceding ones, and in several of the Commissioners' Statements about the NPRM. And it is precisely because all Americans, directly or indirectly, depend heavily in their every-day lives upon the NTSC transmission medium, long slated for replacement by the FCC in its earlier decisions in this ATV Proceeding, that it is appropriate for the Commission to adopt and mandate the entire new Standard in order to support this replacement.

The full Standard will permit immediate deployment of the new television system because its extraordinary flexibility supports consumer and broadcaster entry at varying levels of cost and complexity, where each can chose now, appropriate to his or her needs. With literally thousands of interconnected contributors and users, all of whom must be involved simultaneously for successful roll-out of even the most modest service replacement, the full Standard is the only mechanism which provides the coordination needed.

Therefore, throughout the original replacement period only the full Standard will ensure that all can have access, that users everywhere have, in effect, the simultaneous opportunity to experience and embrace the new system, and that there is a level playing field for continued competition. And, as the implementation proceeds, only the full Standard will support in this universally accessible way, both on-going improvements and additional information services as they evolve.

The primary inducements to consumers to make the switch to the ATSC Standard, of course, will be the appeal of the new HDTV and clean digital TV pictures and sound, plus the plethora of new services which will undoubtedly flow from this all-digital system with unmatched computer interoperability. But the mandated, singular, nation-wide nature of the full Standard will also offer the media-sophisticated American public one more assurance that they are buying into an on-going system which will not falter for want of geographic scope, equipment compatibility, or anticipated technical obsolescence.

Indeed, even though Americans generally have not yet had the chance to experience HDTV, already there are indications of strong consumer interest. An article published in "Broadcasting & Cable Magazine" (December 5, 1994) reported on a poll by Marquest Research about "21 new and proposed media services or delivery systems" and "17 new or emerging TV programming network formats." The finding was that "HDTV drew the most enthusiasm from consumers" when 54% of respondents—the only over-50%-rating—"ranked HDTV within the top three spots on a 10-point interest scale."

Certainly manufacturers who so avidly competed in the ACATS-sponsored ATV system competition, and those who continued by developing and paying for the Grand Alliance HDTV System, believe in this potential. But, not surprisingly, they and other manufacturers and service providers for

today's NTSC, are loathe to fully promote the new DTV system until they can be confident—based on the FCC's adoption and mandate of the ATSC Standard—that there will be a market to sell to even as consumers are advised that NTSC will soon cease.

Further, the full Standard provides the mechanisms for the new digital television receivers and converters to pass through the content of the signals to those consumers who are able to afford, or only wish to have, the least expensive alternative for continuing their free broadcast television service. It should be remembered that there are many applications for 'television' as we know it today, which only need (or afford) portable and/or small-screen receivers, or simple reception and display without extra control or interactive features. With the full Standard receiver manufactures can still offer such 'low-end' receivers and related devices, whose costs are less than those which would have larger displays, greater functionality, and multiple applications. Again, with rapid replacement of today's equipment in mind, this will help ensure that television receivers remain within economic reach of all Americans and that consumer choice remains paramount in the marketplace.

Finally, with the assurance that the transition to DTV is to occur, based on FCC adoption and mandate of the ATSC Standard, there will be economies of scale in manufacturing and distribution and price efficiencies in receiving and production equipment. Together with the internationally compatible nature of key parts of the ATSC Standard, thus the even wider arena for

distributing start-up and production costs, this will serve to spur early entry to and adoption of the system and will benefit consumers, broadcasters, and manufacturers.

III. THE IMPACT ON AMERICAN JOBS & TRADE OPPORTUNITIES

Some 30,000 U.S. workers are directly involved in the manufacture of consumer TV receivers and related devices. Hundreds of thousands more provide parts, equipment, programming, software, and other support for consumer, professional and industrial television products and services. With the shift to a nation-wide system based on the all-digital ATSC Standard, the broadcast arena will widen to encompass more than the parallel to today's 'television', with a consequent expansion of jobs to design, manufacture and sustain the new system.

Adoption of the Standard and implementation of the new system via allocation and assignment of channels to DTV licensees will invigorate the thousands of companies and organizations, employing Americans in every part of the country, which will design, manufacture and sell equipment for this new system. Tens, if not scores, of billions of dollars of investment, over a decade and more, will be released from all quarters to build an entirely new television and information broadcast distribution system in the U.S.—in fact, throughout North America—which must work for some years in parallel with the existing television system.

Reviewing the list of manufacturers who participated regularly in the engineering and policy studies of ACATS illuminates the strong domestic abilities and interest in the adoption and implementation of the new DTV system. In fact, the two TV receiver manufacturers who today provide the two largest shares of domestically manufactured sets—Thomson Consumer Electronics and Philips Electronics North America Corporation—have publicly pledged to the trade unions employed at their factories in several states that they will build HDTV receivers in those factories. And there are reports in the trade and popular press regularly of new designs, new products, and new or often joint ventures ready to use the ATSC Standard, and ready to supply the vast, near-term, and highly varied demand for products and services to accomplish the conversion to DTV, including HDTV. These include broadcast transmitters, high resolution and large flat-panel displays, new HDTV and SDTV cameras, integrated circuits and microchip processors, and many others.

Inasmuch as the rest of the world is already moving to adopt the all-digital technologies, however, the United States has the opportunity to exploit for international trade purposes, its design sophistication and its own manufacturing and licensing strengths which underlie the ATSC Standard. But this is likely to be successful only if the Commission, as the official U.S. agency responsible for communications matters, adopts and mandates the entire standard, without equivocation, just as parallel official bodies have

already done in Europe and will do elsewhere.

Overseas buyers are intent on getting the best equipment and service for the best price, just as domestic ones are. And part of this competition is the certainty that there is more than one supplier and that the system being purchased has the confidence and full support of those promoting it. Nothing is more confidence-inspiring than the affirmation that the system for sale, and its constituent parts, is going into certain use in the U.S. (and North American) market.

IV. SPEED IS OF THE ESSENCE

With adoption and publication of the basic video standard for DTV by the ATSC over one year ago (April 1995), and with international competitors since then—plus the years before while observing and participating in the FCC-sponsored open U.S. process—it is crucial to have the speediest possible Commission adoption and mandating of the Standard, and allocation and assignment of the channels to DTV licensees.

After so many years of U.S. design leadership, plus official and public statements—including that FCC action would not be taken until the ACATS testing was completed—and anticipation of the new national DTV standard, the longer there remains uncertainty, the harder it will be to take full advantage of the American-based lead and to avoid confusion. Far from

'freezing technology' or 'blocking innovation', however, acting now on the ATSC Standard will serve to promote greater attention to, sales of, and we believe, reliance on the ATSC Standard in this country, and even as the basis for world-wide developments. To some extent it has already has this effect in European and Asian designs, because it emphasizes such flexible architecture and embraces many now-internationally compatible elements.

Therefore, the Coalition appreciates the Commission's fast Comments and Reply Comments schedule in this Notice; and we urge prompt adoption of, and comment periods in, the final NPRM in the matter of DTV channel allotments and assignments.

V. CONCLUSIONS

For the above reasons, the Citizens for HDTV Coalition, on behalf of its members listed below, urges the Commission to adopt the ATSC Standard in its entirety, and to require the sole use of that Standard by DTV licensees.

Also, the Coalition wishes to express its gratitude to the Commissioners and the many members of the FCC staff who contributed to the FCC and ACATS processes of ATV specification, testing, evaluation, and analysis—many since its beginnings in 1987!—and for their commitment to the important work of establishing the basis for America's world-leading DTV broadcast television and information transmission system. We salute the Commission for its tentative decisions in this Notice and for its steadfast

support for this successful public-private process. And we congratulate the FCC Advisory Committee, ably chaired by Richard E. Wiley, as well as the ATSC, ably chaired by James C. McKinney, for their work in bringing forward this extraordinary Standard.

Respectfully submitted,

CITIZENS FOR HDTV COALITION

Peter M. Fannon, Chairman

Dated: July 11, 1996